India's Export Performance: A Study of Petroleum Products with Special Reference to Gulf Cooperation Council

Synopsis

Submitted in the partial fulfilment for the requirement of

Doctor of Philosophy

in

APPLIED BUSINESS ECONOMICS

SUBMITTED BY
MAHAZABI

UNDER THE SUPERVISION OF
DR. SUNESHWER PRASAD
Assistant Professor

Department of Applied Business Economics, Faculty of Commerce
Dayalbagh Educational Institute (Deemed to be University)
Dayalbagh, Agra – 282 005

2024

1. Introduction

Globalization has gained momentum primarily through economic integration and the expansion of international trade. India, a relatively recent participant in this global trend, initiated its journey towards international trade after the crisis in 1991. The decision to open up to world trade was a pivotal aspect of the new economic policy, marking an essential component of the reform process. Indian economy and foreign trade have shown progress post liberalization. In contrast to the pre-reform period (1950-90), the actual growth of exports in the post-reform period has been above the potential offered by the growth of world demand. The gap between the actual and potential is mainly explained by an improvement in the overall competitiveness of India's exports [Virmani, (2003), Veeramani, (2007)]. The composition of India's foreign trade has undergone substantial changes, particularly, after the liberalization and globalization. Our major exports now include manufacturing goods such as Engineering Goods, Petroleum Products, Chemicals and allied Products, Gems and Jewelleries, Textiles, Electronic Goods, etc. which constitute over 80 per cent of our export basket (Mathor and Sagar, 2015). As of 2021, the value of exports from India was estimated to be around US$ 330 billion, while the value of imports was estimated to be around US$ 560 billion. To sustain this growth and help India to achieve the set target of US$ 1 trillion in merchandise and US$ 1 trillion in service exports by 2030, it becomes necessary to develop strategies at both domestic and international levels. There is a substantial change in the Indian export basket. Now, the top exports from India include petroleum products, pharmaceuticals, textiles, and engineering goods, while the top imports include crude oil, gold, coal, and electronic goods. Petroleum products have contributed in a major way to Indian export growth. They registered a growth of US$ 6.1 billion. Factors leading to the growth are rising crude oil prices which got aggravated by the post-pandemic world, demand spiking for oil, and the recent geopolitical tension (IBEF). Petroleum exports have experienced a sudden rise, especially in the first decade of the 21 century, and became the second-largest export item in India after engineering products (Kumari, 2023). The global energy market, particularly the trade in petroleum products, plays a pivotal role in the economic landscape of India. India's continuous economic reforms and liberalisation which have been implemented throughout the last three decades, have propelled the nation to become the fifth largest economy[1] in the world. India's petroleum sector stands at the crossroads of tradition and transformation,

embodying the nation's journey from agrarian roots to becoming one of the world's fastest-growing economies. India is a significant consumer of petroleum products. There is a substantial amount of imports of crude oil in our country and this then refines to produced various petroleum products like gasoline, diesel, and other fuels. Petroleum products play a crucial role in both our imports and exports. Petroleum products are derived from crude oil through refining processes in oil refineries. The majority of crude oil is transformed into these products, encompassing various fuel categories such as diesel, LPG, coal, kerosene, gasoline, coke, etc. These products play a vital role in powering India's transportation sector, industries, and households. The term "liquid gold" in the Indian context reflects the critical role of petroleum in supporting the nation's economic activities and growth. The consumption volume of petroleum products in India was approximately 205 million metric tons in fiscal year 2022. The country was ranked third with regard to primary energy consumption across the globe[2].

By 2020, the production volume of petroleum products in India had surpassed 195 million metric tons. The private sector played a pivotal role, contributing immensely to the industry's growth. Private initiatives led to the addition of nearly 90 million metric tons in refinery capacity in 2020 alone. Currently, India has the world's largest refinery viz. Jamnagar Refinery, Gujarat. The refinery now has a capability of 1,240,000 barrels per day, making it the largest refinery in the world[3].

In the year 2021, India emerged as the world's third-largest exporter of Refined Petroleum, with exports totaling $49 billion. Refined Petroleum stood as India's topmost exported product during the same period. The top regions where India exported its petroleum products in the FY 2022 are Asia, Europe and Africa in which, the export of petroleum product in Asia accounts for 46.24% of total export of petroleum product in the world[4]. India exported petroleum products worth $86.21 billion during the first 11 months of the financial year ending March 2023, which accounts for more than 21 per cent of India's total commodity exports[5].

Table 1 Indian Export of Petroleum Product to the World (Values in Rs. Crs)

Year	Export value of POL (HS code 27)	Total Export from India	% Share
2018	3,35,47,439.80	23,07,72,619.38	14.53
2019	3,02,36,717.45	22,19,85,418.10	13.62
2020	1,99,07,315.89	21,59,04,322.13	9.22
2021	5,19,51,667.36	31,47,02,149.28	16.5
2022	8,12,66,998.88	36,21,54,987.57	22.44

(Source: Export Import Data Bank, Department of Commerce, Ministry of Commerce and Industry, Government of India)

1.1 Petroleum Industry

In India, we have eight core industries viz. Cement, Coal, Crude Oil, Electricity, Fertilizers, Natural Gas, Refinery Products and Steel. The petroleum industry is a part of these eight core industries in India. The petroleum industry stands for 15% of the country's Gross Domestic Product (GDP). The Indian petroleum industry embarked on its journey at a sluggish pace, originating in Digboi, Assam. Initially, petroleum production and extraction were confined mainly to the North-Eastern regions of the South Asian nation until the 1970s. In the initial stages, the government fully subsidized the entire market. However, in July 1991, with the advent of economic liberalization and privatization, the Indian government began transferring industrial control to private entities and engaging in joint ventures. This move injected significant momentum into the sector, facilitating its expansion. India's economic growth is closely related to its energy demand, therefore, the need for oil and gas is projected to increase, thereby making the sector quite conducive for investment. India retained its spot as the third-largest consumer of oil in the world as of 2022. The Government has adopted several policies to fulfil the increasing demand. It has allowed 100% foreign direct investment (FDI) in many segments of the sector, including natural gas, petroleum products and refineries, among others. Public sector refining projects now have a 49% FDI cap, with no disinvestment or diluting of domestic ownership in already-existing PSUs. These days, it draws investment from both domestic and international sources, as demonstrated by the existence of businesses like Reliance Industries Ltd (RIL) and Cairn India. On Jan 08, 2024, Hardeep Puri, the Union Minister of Petroleum, announced Oil and Natural Gas Corporation (ONGC) commenced its 'new oil production' from the deep-water block in the Krishna Godavari (KG) basin off the Bay of Bengal on the Kakinada coast.

- **Location:** The oil extraction is taking place 30 kilometres off the coast of Kakinada, in the Krishna Godavari basin.
- **Initial Production Phase**: Currently, four out of 26 wells are operational.
- **Production Forecast**: By May or June, the production is expected to reach 45,000 barrels per day, accounting for 7% of India's total crude oil production[6].

Petroleum is classified as a fossil fuel and it can be extracted in two forms which are liquid and vapor. Liquid is crude oil, while vapor is gas. Three primary stages of harvesting are involved: downstream,

midstream, and upstream (Jayameena Desikan, et al, (2022). Upstream exploration and production companies seek out and extract raw material resources. This category is characterized by significant investment capital, high risks, extensive duration, and technological rigor. Geologists, service rig operators, geophysicists, scientists, engineering firms, and seismic and drilling contractors are among those employed in the upstream industry. These specialists can locate and estimate reserves before any drilling activity begins. The midstream segment is primarily involved with all aspects of natural gas and oil transportation and storage. They include all of the infrastructure needed to transport these resources across long distances, such as tank trucks, transcontinental tankers, pumping stations, and retail tank cars. Downstream is the final step of the manufacturing process in which combustible gas and unrefined petroleum are refined and products are delivered to customers and end users. They are firms in charge of refining oil and gas and transforming it into numerous end products that people use every day, such as heating oil, jet fuel, asphalt, diesel, natural gas, gasoline, lubricants, heating oil, propane, pesticides, and medications.

Table 2 Prominent Companies under Different Streams of Petroleum Industry

Streams	Prominent Companies
Upstream	Oil and Natural Gas Corporation, Reliance Industries Limited, Oil India Limited, BP PLC and Larsen & Toubro
Midstream	Indian Oil Corporation, Petronet LNG Limited, Adani Enterprises Ltd, Hindustan Petroleum Corporation Limited, Gail Limited.
Downstream	Bharat Petroleum Corporation Limited, Indian Oil Corporation Limited, Hindustan Petroleum Corporation Ltd., Nayara Energy Limited,

1.2 Gulf Cooperation Council

The Gulf Cooperation Council (GCC) was established on 25 May 1981 in Riyadh, Saudi Arabia by an agreement among six countries which are similar in geographic proximity, similar political systems based on Islamic beliefs, joint destiny and common objectives. These countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE. Presently it encompasses a total area of 2,672,700 sq.km. The official language is Arabic. The primary objectives of the GCC are to promote economic integration, cooperation in defence and security matters, and the overall stability of the Gulf region. In 2002, the GCC took a significant step toward greater integration by establishing a common currency, though this initiative faced challenges and was eventually put on hold. Throughout the early 2000s, the GCC focused on economic diversification, infrastructure development, and social progress. The member states also

engaged in joint efforts to address regional security concerns, particularly in the face of geopolitical challenges. The year 2007 saw the GCC Summit in Doha, where leaders discussed strategies for enhancing economic cooperation and furthering integration. However, internal differences on issues such as political reform and the handling of regional crises occasionally strained the unity of the council. Despite occasional challenges, the GCC remained a pivotal player in the geopolitics of the Middle East, working collectively to address common challenges and capitalize on shared opportunities, particularly in the economic sphere. The year 2008 witnessed the establishment of the GCC Common Market, aimed at facilitating the free movement of goods, services, and capital among member states, fostering a deeper level of economic collaboration.

India and the Gulf Cooperation Council (GCC) countries, including Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, share a significant bilateral trade relationship in crude oil and petroleum products. This collaboration is anchored in the Gulf nations being major suppliers of energy resources to India. India, as one of the world's fastest-growing economies, is heavily dependent on imports to meet its energy needs. The GCC countries, endowed with abundant oil and natural gas reserves, play a crucial role in fulfilling this demand. India imports a substantial portion of its crude oil from the GCC, ensuring a stable and reliable source of energy. In return, India often exports refined petroleum products, leveraging its refining capacity to add value to the raw crude it imports. In the financial year 2022-23, the export value of petroleum product from India to GCC is INR 1,06,71,949.73, which is 28% of the total export of the petroleum product to Asia[4]. It Shows that GCC is the region where India exported its petroleum product the most in the FY 2022-23. This bilateral trade not only satisfies India's energy requirements but also fosters economic interdependence, contributing to the overall economic development and stability of both the Gulf region and India. The collaboration underscores the strategic importance of energy cooperation between India and the GCC nations.

Table 3 India's Export of Petroleum Product to GCC Countries (HS CODE 4 digit) (Values in Rs. Crs)

HS Code	Description	2018	2019	2020	2021	2022
2701	Coal briquettes	427.78	218.93	165.58	3,075.55	9,299.67
2704	Coke and semi-coke of coal	193.25	162.98	1,247.88	2,066.78	724.46
2707	Oils and other products	264,289.59	140,461.69	95,756.85	418,980.36	561,109.39

2708	Pitch and pitch coke,	661.18	638.03	707.54	405.80	6,249.32
2710	Petroleum oils	4,889,519.82	4,709,359.63	2,750,572.53	7,053,872.54	9,981,669.97
2711	Petroleum gases and other gaseous hydrocarbons	9.67	75.38	16.26	43.38	86.82
2712	Petroleum jelly and wax	6,971.33	8,187.47	6,162.69	7,842.14	7,359.55
2713	Petroleum coke	68,966.39	34,432.33	25,053.41	56,980.84	103,790.92
2715	Natural asphalt, natural bitumen, mineral tar pitch	13.38	65.17	8.85	813.56	548.57

(Source: Export Import Data Bank, Department of Commerce, Ministry of Commerce and Industry, Government of India)

2. Review of Literature

The review of literature for the present study has been classified into three categories viz. literature related to study of petroleum product/industry, literature related to study of bilateral trade, and literatures related to study of trade relation with GCC countries.

2.1 Literature Related to Study of Petroleum Product/Industry

Kulkarni M. et al (2023), in their paper titled examined the effect of COVID-19 on the export and import volumes of petroleum products and crude oil in India. Along with that, the research also covers the changes observed in the consumption and production of petroleum products and domestic and international exchange rate of crude oil before and after the outbreak of COVID-19. Levene's F test is used in this study for analysis of data. He concluded that the import after COVID-19 has decreased in value. Hence, there is negative but smaller effect of COVID-19 on the total import values. However, the export values have seen to be increasing when compared with the previous year export volume, and there is a negligible fall in import volumes when compared with the previous year. Sinha M. (2023), in his paper focused on the structural change in the composition of commodities exported from India since 1987 to 2014. Gems and Jewellery is at the top exporting commodities from India. Top five exporting commodities are gems and jewellery; readymade garments; basic chemicals, pharmaceuticals and cosmetics; cotton yarn and fabrics; petroleum products. These five commodities are accounted for more than 63 percent of total export during 1987-88:2013-14. India's export basket has been changed over the time. The share of petroleum products in India's export basket has been increasing since 2000-01. Shalu K. et al (2023), in their paper titled work on three main objectives viz. to examine the growth

patterns of petroleum product exports in India from 1991 to 2019, to analyse the structural dynamics of petroleum product exports in India from 1991 to 2019, and to explore intra-industry trade in India's petroleum sector from 1991 to 2019. It was found that petroleum product exports in India grew outstandingly during the study period, registering higher growth than imports and the production of these products. India outperformed the world and the majority of giant petroleum exporters in the global export market. The findings also confirmed the high degree of diversification in the composition and direction of petroleum exports. Petroleum trade in India also witnessed a high degree of intra-industry trade. Victoria O.U. (2023), in his paper focused on examined the impact of oil trade on Nigeria's oil sector growth by using secondary data for oil trade data of 1983 to 2021 with unit root and Engel-Granger Error Correction Model. The study concludes that effective management of the oil supply bloc holds greater potential for fostering growth in the Nigerian oil sector compared to the demand bloc. Consequently, it recommends that the Nigerian government prioritize refinery rehabilitation to maximize production and focus on exporting both crude oil and refined petroleum products. This strategy aims to broaden the nation's oil revenue base and eliminate the need for refined petroleum imports. Monge M. et al (2023), in the paper examined the impact of geopolitical risk on the behavior of oil prices and freight rates by using Unit root, ARFIMA, FCVAR model. They took the data of Oil prices, Baltic dry index, Geopolitical risk index, Fractional integration for the years from 1985 to 2021. From the findings of the study, it can be inferred that the shipping and trade index devised by the London-based Baltic Exchange, along with the geopolitical risk index, exhibit stationary behavior. In contrast, oil prices demonstrate distinct statistical behavior diverging from these non-stationary patterns. This study also employs fractional integration techniques to gauge persistence levels. The findings indicate that both the GPR and BDI series tend to revert to their means, suggesting that in case of an external shock, these series will return to their initial trends.

Azhar M. (2021), in his study titled explored the trends of import and export of petroleum product. He identified the trend of different petroleum product such as naphtha, motor spirit, aviation turbine fuel, and HSD, over the period of 20 years from 1998 to 2017. In his study, with the help of previous year data, he provided information about the rank of petroleum products among India's exportable commodities in the HS-4 digits commodity classification. Petroleum products became the second largest

exportable commodity from India in 2000–2001 and it remained so to 2005–2006. During 2006–2007 it became the top exportable commodity from India. his reflects the importance that petroleum products have acquired in India's export profile. Gosh S. (2018), in his paper estimated the interest for imported raw petroleum utilizing auto backward appropriated slack—ARDL testing approach. The demand of crude oil leads to the study of various factors of those determinants of exports to understand the demand and supply chain of petroleum products.

Zhang Z. et al (2018), in their paper focused on the global pattern of the international trade of crude oil and petroleum products quantitatively. This study utilizes a complex network approach to analyze global trade patterns of crude oil and petroleum products. It examines average trade volumes, network connectivity, partitioning, and major countries in communities to uncover insights. Results reveal higher connectivity and partitioning in petroleum products networks compared to crude oil. The 2008 financial crisis had contrasting effects on global trade patterns of the two commodities, with geographical factors more pronounced in crude oil trade. Dalei N., Roy H. & Gupta A., (2017), in their study applied fixed effect model of panel data analysis in terms of pooled OLS using country specific dummy and their interaction with macroeconomic factors. Their findings stated that UAE remained relatively most preferred nation than Saudi, Iraq, Iran and Malaysia for India in terms of import of crude oil; controlling all other factors except GDP per capita. Okafor O. S. (2014), in his paper focused on detailed analysis on trade transactions within Nigeria's petroleum product market. Partial correlation was used to analyse the data which interpret the result that there was an inverse relationship between demand and price of petroleum product.

Chakrabarty R. and Chakravarty S.H. (2012) in their paper analyse the export and import of black gold (oil) with respect to the Indian scenario. The study extensively tries to capture the trends over the last four decades. In this paper export of oil, import of oil, and GDP at constant prices are consider as variables. The analysis tells us that the data on oil exports, oil imports and GDP at constant price are integrated of order one i.e. I (1). The cointegration results are positive for the bivariate cases of LG – LM, LG – LX, but not for LX – LM. The trivariate results for LG – LM – LX also show the presence of cointegration. While a suitable VAR Model was set up for LX – LM, for the other cases, a VEC model was constructed. At the end, this paper also suggests some policy implications.

2.2 Literature Related to Study of Bilateral Trade

Bilateral trade between India and the Gulf Cooperation Council (GCC) has seen significant growth, reaching $154.66 billion in FY 2021-22, up from $87.35 billion in FY 2020-21, marking a 77.06% increase. Khan F. & Sulaiman M. (2022), examined the trends and potential avenues of Indian trade with Gulf Cooperation Council (GCC) countries during the COVID-19 era, data from January 2020 to December 2021 was collected from secondary sources and subjected to analysis. Specifically, this research delves into the effect of the pandemic on India's overall trade dynamics with GCC member states. The findings suggest that India's exports to the GCC countries have experienced a greater adverse impact due to COVID-19 restrictions compared to its exports to other global destinations. Despite the fact that the Gulf Cooperation Council countries offer India immense opportunity for trade and investment. Alam I. and Ahmad S. (2018), in their paper, for the period between 2001 and 2015, the used a Panel gravity model to explore the factors of India-GCC trade flow. The findings show that the size and type of the economy, trade openness, and binary variables such as trading affinity and Diaspora have a positive impact on India-GCC trade, but distance has a negative impact. Results signify that India and the GCC have significant trade potential. This paper suggests that India should remove all type of trade barrier & dummy variable. Yadav A.K. & Yadav U.C. (2017), in their study examined India's trade relations with Bahrain have undergone significant transformation over the years, with bilateral trade surpassing the US$ 920.4 million mark in 2014. However, there remains a need to diversify the structure and pattern of trade. There is substantial potential for India to expand its export structure based on new growth sectors where it holds a global comparative advantage relative to Bahrain's import structure. Despite this potential, India's trade with Bahrain has not yet achieved optimal outcomes. The identification of areas of global revealed comparative advantage could aid Indian exporters in exploring new avenues for exporting goods not currently traded with Bahrain. Key categories for potential trade expansion include edible vegetables, articles of iron or steel, iron and steel, meat and edible meat offal, and mineral fuels and oils. Alam I. and Ahmad S. (2017) examines UAE's role as India's top trading partner despite its small population. It reveals that UAE's status as the world's third-largest exports and re-exports hub is pivotal in this relationship. Correlations indicate re-exports through UAE significantly strengthen trade ties between the two nations. Additionally, the study explores future trade potential

between India and UAE, highlighting various export opportunities and predicting positive trade outcomes with increased economic integration. Goyal A. & Vajid A. (2016), discussed the pattern of India's trading relationship with the United Arab Emirates, with a focus on overall trade and the composition of bilateral trade between the two nations. The Nature of work basically is analytical and the study is based on secondary data. They also suggested the measures of strengthens Indo-UAE trade. The result of this study shows that India and the UAE are working hard to take their economies and trade ties to new heights in the global market, and make sure that their relation continues to grow. Alam I. (2015) examines the growing trade relations between India and Qatar. Qatar ranks third among GCC countries in trade volume with India, primarily due to its significant supply of liquefied natural gas (LNG). The study calculates trade intensity and comparative advantage indices from 2001 to 2013, revealing that India's trade with Qatar is notably intense. Despite a trade deficit, India holds comparative advantages in several goods, suggesting potential for improved trade balance through focused export strategies. Alam I. and Ahmad S. (2015) examines the bilateral trade dynamics between India and Saudi Arabia from 2001 to 2013. Despite Saudi Arabia ranking fourth among India's trading partners and India being the seventh largest partner of Saudi Arabia, the study reveals distinct trade structures between the two nations. Analyzing trade intensity and revealed comparative advantage, it suggests that their trade specialization fosters mutual benefits and enhances economic growth potential. The findings indicate positive trends in bilateral trade, promising favorable economic relations between the two nations.

2.3 Literatures Related to Study of Trade Relation with GCC countries

India is a reliable oil customer for a long run to GCC or GCC is a reliable supplier of oil and gas to India, and that is why both are interested on each other (RigiLadez and Khan, 2014). India is interested in upstream investments in the GCC oil and gas industry to facilitate its long-term access to GCC oil. GCC countries are interested in downstream oil and gas investments in India, which will help with sales of their crude and refined oil products (Nader Habibi, 2011). Pethiyagoda K. (2017) goes on to an analyse that the relationship was still driven smoothly with the economic, trade, and migrant labour at interest. The strategic partnership between India and the Gulf Cooperation Council is examined in this article. It has been reported that a strong India-GCC economic cooperation will be feasible for both sides in the upcoming years and that New Delhi is being compelled by a number of circumstances to assess

the strategic elements of India-GCC commercial connections. Khan M.A. and RigiLadez S. (2014), in their paper looks at India's trade ties with the Gulf States. The nature of trade between India and the Gulf countries has changed throughout time, but it has not yet diversified in terms of structure. The value of trade between India and the Gulf has reached over $100 billion, but India's trading system is still narrowly centered on a selected few conventional goods. India's export pattern has enormous potential to diversify based on the emergence and expansion of several new industries in which India has a competitive advantage over the Gulf areas. They offer quantitative data on commerce between India and the Gulf States as well as an overview of trade between the two countries. They also provide the macroeconomic Trends in the Gulf States and India. They also recognize the importance of bilateral trade & potential between India and gulf region. Das P.K. & Pradhan S.R. (2014), examined India's trade with the Gulf region, emphasizing its transformation amid robust economic growth. Even though trade between the two countries exceeds $100 billion, traditional goods continue to comprise up the majority of India's exports. Notably, this growth lacks a specialized trade promotion policy. India's exports might be greatly expanded by concentrating on developing industries in which India has competitive advantages on a worldwide scale. "GULF DIRECT," a single trade strategy tailored to the Gulf that involves the public, private, and trade associations, is suggested. The objective of this strategy is to broaden India's trading base and improve collaboration with the strategically important Gulf area in a number of economic sectors. Saddam A. & Kari F. (2012), discuss the Intra-regional trade of Gulf Cooperation Council (GCC) countries. This study showed that intra-regional commerce appears to be at a low level, with the trade intensity index showing negative signs, with the exception of the UAE and Saudi Arabia. This study shows a heavy reliance on oil export revenue and indicates that the GCC nations' combined economic strategies have not succeeded in increasing intra-regional trade. The study revealed that Saudi Arabia and the United Arab Emirates (UAE) had a favorable influence on intraregional trade. The positive signals of the intensity index indicate that the countries had good aspects in their non-oil industries between 1998 and 2008. According to negative group of countries (Bahrain, Kuwait, Oman, Qatar) we can say that these countries have not achieved a comparative advantage in their non-oil sectors. These countries depend on oil sector and suffer from the disadvantage of the lack of non-oil industries. Zacharia G. et al (2011), this paper discusses the bilateral trade relation

of India with GCC countries. The trends and pattern of trade of each GCC state has been shown in this paper, its relation with India and also estimates the share of each GCC state concerning India. For the betterment of trade relationship with GCC, India has made various policies, which are discussed in this study. It also shows the strong trade potential in the bilateral relation which provides for a strong political commitment. Pradhan S. (2009), examined India's economic and political presence in the Gulf. This article discusses India's economic and political involvement in the Gulf. Trade ties between the Gulf and India, which date back more than 3,000 years, have developed into a worldwide network with India at its center. India was made more accessible to the outside world by Arab navigation and trade, and early Islam's Arab desire for knowledge facilitated the spread of Indian knowledge to Europe and vice versa. Pradhan S. (2008) examined the various fundamentals of the oil and gas market in India and GCC Countries. He investigates one aspect of such a transition, imagining the emerging pattern of energy interdependence between India as a major energy consumer and importer, as well as the prominence of Gulf Cooperation Council countries as the primary source of energy supplies for India and the rest of Asia. The book contends that the growing pattern of energy-related linkages and trends would serve as a stimulant to propel bilateral economic relations between India and the GCC to new heights.

3. Research Gap

- After reviewing the existing literature, it is inferred that a lot of researches are conducted on petroleum products but none of the researcher examined the export of petroleum product from India.
- Previous studies on petroleum product were not focused on trade to specific region viz. EU, GCC, ASEAN, etc., so there are potential areas to study export pattern of petroleum product to these regions.
- There is a research gap in understanding the intricate drivers, such as geopolitical considerations, cultural and economic factors, regulatory frameworks, and market dynamics, that shape the patterns of India's liquid gold export.

4. Problem Identification

The export dynamics of petroleum products from India to the Gulf Cooperation Council (GCC) countries in West Asia constitute a multifaceted area ripe for exploration and analysis. Despite the evident significance of this trade relationship, several critical problem areas demand attention to

comprehensively understand its complexities and potential for optimization. This research aims to identify and address these key problem areas, including trade pattern and compositions, trade policies and agreements, economic factors, infrastructure and logistics, technological advancements, geopolitical factors, market dynamics and competition, etc.

5. Justification of the Study

As per the New Foreign Trade Policy (2023) India must achieve the export target of $2 trillion by 2030. This target can only be achieved by increasing the export quantity. Petroleum products are one of the most exported commodities of India's export basket. This study will help to understand the trends in the export of petroleum product, to know the potential areas and to help the policy makers to liberalise the existing policy so that the export of petroleum product can get a boost.

6. Research Questions

- How has India's export performance of petroleum products with Gulf Cooperation Council (GCC) countries evolved throughout the 21st century?
- What role do government policies play in shaping India's export performance of petroleum products to GCC countries?
- What is the composition of Indian export of petroleum product to Gulf Cooperation Council?
- What factors have influenced India's export growth/decline of the petroleum product with GCC?
- What is the potential of Indian export of petroleum products in Gulf Cooperation Council?

7. **Research Objectives**

Following are the objectives of the present study

1. To study India's export policies and institutional framework in general and with a specific focus on petroleum products.
2. To analyse the export patterns and composition of petroleum products from India to Gulf Cooperation Council (GCC) countries as a whole.
3. To analyse the India's Export Potential of petroleum products to the Gulf Cooperation Council (GCC) Countries.
4. To Identify the factors influencing India's exports of petroleum products to GCC countries.
5. To suggest the ways and means for promotion of petroleum product exports from India

8. **Research Methodology**

Nature of Research: This research will be descriptive and analytical in nature because it will try to trace the framework of export promotion policies; and it will also try to evaluate the pattern and the various factors affecting the export of petroleum product.

Scope of Study: Scope of this study will be Gulf Cooperation Council (GCC), which includes six countries *viz.*Behrain, Kuwait, Qatar, Oman, Saudi Arabia and United Arab Emirates.

Sample Size: Total 9 product will be taken for the study. These products are

Table 4 List of Petroleum Products with Their Respective HS Code

HS Code	Products
2701	Coal; briquettes, ovoids and similar solid fuels manufactured from coal.
2704	Coke and semi-coke of coal, of lignite or of peat, whether or not agglomerated; retort carbon.
2707	Oils and other products of the distillation of high temperature coal tar
2708	Pitch and pitch coke, obtained from coal tar or from other mineral tars
2710	Petroleum oils and oils obtained from bituminous minerals, other than crude
2711	Petroleum gases and other gaseous hydrocarbons
2712	Petroleum jelly, paraffin wax, microcrystalline petroleum wad, slack wax, ozokerite, lignite wax, peta wax, other mineral waxes, and similar products
2713	Petroleum coke, petroleum bitumen and other residues of petroleum oils or of oils obtained from bituminous minerals
2715	Bituminous mixtures based on natural asphalt, on natural bitumen, on petroleum bitumen, on mineral tar or on mineral tar pitch

Sources of Data: This study will be purely based on the secondary data. Data will be collected from official sources viz. export import data bank, ministry of commerce, and Handbook of statistics on the Indian Economy, RBI, petroleum planning and analysis cell (PPAC), the observatory of economic complexity, OPEC Data set, Journals, research papers, news article, etc.

Duration of the Study: The duration of study will be for twenty two years commencing from FY2004-05 to 2025-26.

Tools for Analysis: CAGR**,** Time series analysis, regression, related diagnostic test, basic gravity model and augmented gravity model, and other suitable test shall be used for analysing the data as per its nature and requirement.

Table 5 Proposed Chapter Plan

Chapter No.	Chapter Name
1	Introduction
2	Review of Literature
3	Economic Policies Governing India- GCC trade
4	Export of Petroleum Products to GCC- An overview

5	India's Export Potential to the Gulf Cooperation Council (GCC) Countries
6	Findings and Suggesstions
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